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Yokogawa Releases the DTSX™1 Fiber Optic Heat Detector
–An OpreX™ Field Instruments facility monitoring and fire detection solution that is housed in an easy-to-install enclosure–

Yokogawa Electric Corporation (TOKYO: 6841) announces that it has developed the DTSX™1 fiber optic heat detector, an OpreX™ Field Instruments heat sensing and fire detection solution. The new product was released on September 21. Housed in an enclosure and suitable for use with Yokogawa-specified fiber optic cables, the DTSX1 is a cost-effective all-in-one facility monitoring and fire detection solution that is easy to install. It is expected that this solution will aid in the timely identification of maintenance issues and thereby improve plant uptime and reduce maintenance costs.

Due to aging facilities, labor shortage-related safety management issues, and various other problems, the risk of fire is always a concern at industrial facilities, and there is thus a rising need for heat detection solutions. With their ability to measure the temperature distribution and pinpoint anomalies along the entire length of a fiber optic cable, fiber optic heat detectors are a promising solution to such concerns, and devices of this type are increasingly used for monitoring temperature at a broad range of facilities.

In 2011 and 2014, respectively, Yokogawa released the DTSX200 and DTSX3000 fiber optic temperature sensors for use in applications such as the detection of abnormal heat build-up in coal and wood chip conveyors, the measurement of temperature changes in unconventional oil and gas wells, and the detection of the leakage of high- and low-temperature liquids and gasses from pipelines and tanks. In response to the growing demand for facility maintenance solutions that can prevent incidents caused by heat-related failures at industrial facilities, as well as the need to comply with fire detection standards[*1], Yokogawa has developed the DTSX1. This easy-to-deploy detector is specifically designed for use in heat sensing and fire detection.

Product Features

1. Cost-effective and easy-to-install all-in-one solution

All DTSX1 components including an easy-to-read display, relay output circuits, alarm circuits, and other hardware required for heat detection are housed in a single enclosure measuring 50 cm (W) × 50 cm (H) × 25 cm (D). Suitable for use with Yokogawa-specified fiber optic cables

and designed specifically for use in facility monitoring and fire detection applications, the DTSX1 is easy to install, takes less time to install[*2], and costs less than a general-purpose fiber optic temperature sensor.

2. Able to measure data from 4 cables up to 16 km in length

The DTSX1 can accommodate up to 4 channels receiving temperature data via fiber optic cables that each can be up to 16 km in length. In terms of number of channels and total measurement distance, the DTSX1 outperforms all fiber optic heat detectors currently on the market[*3]. The number of channels can be set to 1, 2, or 4, and the measurement distance can be set to 2, 4, 6, 8, 10, or 16 km.

3. Ready-to-use GA10 templates for monitoring facility status

Templates have been created for Yokogawa's GA10 PC-based data logging software that facilitate the display of DTSX1 data. Monitoring windows for each type of application enable the quick detection and location of failures.

*1 An application to certify the DTSX1 for compliance with the EU's EN54-22 fire detection standard is pending.

*2 The overall installation time from the start of installation to the completion of setting has been reduced by approximately 30%.

*3 Based on a September 2018 Yokogawa survey

Future Commitment

Maintenance is becoming an increasingly pressing issue as facilities age and skilled personnel retire. Leveraging the ability of the DTSX1 to integrate smoothly with its integrated production control systems, safety instrumented systems, and data acquisition and control systems, Yokogawa will offer solutions that mitigate the risk of fire and help customers operate their facilities safely.

About OpreX

OpreX is the comprehensive brand for Yokogawa's industrial automation (IA) and control business. The OpreX name stands for excellence in the technologies and solutions that Yokogawa cultivates through the co-creation of value with its customers, and encompasses the entire range of Yokogawa's IA products, services, and solutions. This brand comprises the following five categories: OpreX Transformation, OpreX Control, OpreX Measurement, OpreX Execution, and OpreX Lifecycle. The DTSX1 fiber optic heat detector is an OpreX Field

Instruments family solution in the OpreX Measurement category of field instruments and systems that enable highly precise measurement, data acquisition, and analysis.

With this brand, Yokogawa will deliver integrated solutions that address specific needs and support its customers in their efforts to transform and grow their businesses.

About Yokogawa

Founded in 1915, Yokogawa engages in broad-ranging activities in the areas of measurement, control, and information. The industrial automation business provides vital products, services, and solutions to a diverse range of process industries including oil, chemicals, natural gas, power, iron and steel, and pulp and paper. With the life innovation business the company aims to radically improve productivity across the pharmaceutical and food industry value chains. The test & measurement, aviation, and other businesses continue to provide essential instruments and equipment with industry-leading precision and reliability. Yokogawa co-innovates with its customers through a global network of 113 companies spanning 61 countries, generating US$3.8 billion in sales in FY2017. For more information, please visit www.yokogawa.com/za